UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,109	07/08/2003	Brian James Knight	60707-1420	7691

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EXAMINER
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ART UNIT	PAPER NUMBER
2609	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *25 April 2007*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-13* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-13* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *7/8/2003* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

This action is in response to Applicant's amendment filed on 4/25/2007. Claims 1-13 are now pending in the present application.

Drawings

The drawings are objected to because some of them are not legible. Please refer to the "Notice of Draftsperson Patent Drawing Review" for details.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1,

148 USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Priem et al. (U.S. Patent # 6282587), in view of **Radko (U.S.Patent # 5687392)**, and

in view of **Beshai et al (U.S. Patent Publication # 20040213291)**, and further in view of

Saito (U.S. Patent # 6198746).

Consider **claims 1, 3 5, 6, 7, 9, 10, 11, 12 and 13**, Priem et al. clearly disclose

and show a method for transferring network packet data stored in memory to an output

device (fig. 1 (DMA->FIFO->I/O device), abstract), the method comprising the steps of:

storing the first sequence of packet data octets in a FIFO buffer (fig. 1 (FIFO),

column 2, lines 1-9) operably connected to the output device (fig. 1 (I/O drvice)) when

the octet length of the sequence of packet data octets is equal to the octet length of a

data word (fig. 5a (data length equals FIFO));

However, Priem et al. do not specifically disclose where to store the data octets

which exceeds the octet length of a data word.

In the same field of endeavor, Radko clearly discloses and shows an alignment

register (fig. 3, dynamically allocated DMA transfer Buffer (387)) and the storing of

packet sequence which is longer than the data word (column 7, lines 58-61).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to transfer packet data stored in memory to output

device, as taught by Priem et al., and handle the data octet which is longer than a

data word, as taught by Radko; thereby enable the storing of data packets of variable

lengths in the FIFO registers.

However, Priem et al, as modified by Radko, fail to show the concatenation of packets. Furthermore, Beshi et al. clearly show the concatenating of one or more packet data octets (fig.1, lines 1- 6) from at least a first data word having at least one packet data octet (fig. 1 (100)) to be included in a network packet to generate a first sequence of packet data octets (fig. 1 (112)) having an octet length at least as great as an octet length of a data word;

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to transfer packet data stored in memory to output device, as taught by Priem et al., and store the data octet which is longer than a data word, as taught by Radko; so that concatenated data packets of equal length can be stored in the FIFO registers.

However, Priem et al. as modified by Radko et al., and further modified by Beshi et al. do not specifically disclose the handling of data packets logner than a data word. In addition, Saito clearly shows how to handle the octet length of the first sequence of packet data octets exceeds the octet length of a data word (fig. 2a-d, column 4, lines 41-46 (disassemble the excess packet octet into smaller packets, concatenate enough small packets to the existing packet octet so that it equals a word length and sores it in the FIFO. The remaining small packets will be placed in the alignment register to be concatenated with the other packets that follow. Basically, if the packet octet in the alignment buffer accumnulate to a word length, send it to FIFO. Any thing les than a wod length has to be paker in the alignment register to be concatenated to a word length before being moved out.).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention was made to transfer the data packets in memory, as taught by Priem et al., store packets in the alignment register, as taught by Radko, concatenate the packets, as taught by Beshi et al, and disassemble the packets, as taught by Saito, in order to transfer variable size packets in a most efficient way.

Consider **claim 2, and as applied to claim 1 above,** Priem et al., as modified by Radko, and modified by Beshi et al., and further modified by Saito, clearly disclose and show a method as described.

However, Priem et al., as modified by Radko, and modified by Beshi et al., and further modified by Saito, do not specifically show the alignment register.

In the same field of endeavor, Radko clearly show and disclose the step of storing the first sequence of packet data octets in the alignment register (Radko: inherently taught in fig. 3, dynamically allocated DMA transfer Buffer (387)) when the octet length of the first sequence of packet data octets is less than the octet length of a data word (Radko: inherently taught in column 7, lines 58-61).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention was made to store the data in a temporary place if the data sequence is less than a data word.

Consider **claims 4 and 8**, and **as applied to claim 1 and 5, respectively, above,**

Priem et al., as modified by Radko, and modified by Beshi et al., and further modified

by Saito, clearly disclose and show the method as described except the step of the

octet length of a data word is an integer multiple of four.

In the same field of endeavor, Beshi et al. clearly shows and discloses that the

data word's octet length could be an integer multiple of four (inherently taught in

paragraph 52, lines 1-5 (a word could be four octets)).

Therefore it would have been obvious to a person of ordinary skill in the art at

the time of invention was made to create the octet length of a data word in an integer

multiple of four.

Response to Arguments

Applicant's arguments with respect to claims 1-13 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to:**

Commissioner for Patents
P.O. Box 1450

Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sai-Ming Chan whose telephone number is 571-270-1769. The examiner can normally be reached on monday - Friday 8:00-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael perez-gutierrez can be reached on 571-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sai-Ming Chan

May 17, 2007